

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

› [BESTEK](#) /

› [BESTEK 300W Pure Sine Wave Power Inverter User Manual MRZ3013BU](#)

BESTEK MRZ3013BU

BESTEK 300W Pure Sine Wave Power Inverter User Manual

Model: MRZ3013BU

1. INTRODUCTION

Thank you for choosing the BESTEK 300W Pure Sine Wave Power Inverter. This device converts 12V DC power from your vehicle's battery into 220V AC household power, allowing you to operate various electronic devices on the go. It features a pure sine wave output, which is ideal for sensitive electronics, and includes two USB charging ports and one AC outlet. Please read this manual thoroughly before use to ensure safe and optimal performance.



Image 1.1: BESTEK 300W Pure Sine Wave Power Inverter with accessories.

2. IMPORTANT SAFETY INSTRUCTIONS

Please read and understand all safety warnings and instructions before installing or operating this inverter. Failure to follow these instructions may result in electric shock, fire, serious injury, or property damage.

- **DO NOT** open the inverter casing. There are no user-serviceable parts inside.
- **DO NOT** expose the inverter to rain, moisture, or extreme temperatures.
- **DO NOT** connect the inverter to 24V DC systems. This inverter is designed for 12V DC ONLY.
- Ensure proper ventilation around the inverter. Do not block ventilation openings.
- Keep children away from the inverter.
- Always connect the inverter to a battery in a well-ventilated area.
- Avoid connecting appliances that exceed the inverter's 300W continuous power rating.
- Disconnect the inverter from the power source when not in use or before cleaning.
- Use only the provided cables and accessories.
- In case of smoke, unusual odors, or abnormal operation, immediately disconnect the inverter from the power source.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- BESTEK 300W Pure Sine Wave Power Inverter
- Cigarette Lighter Adapter
- Battery Clamp Cables (Red and Black)
- User Manual (this document)
- Spare Fuses (2 included)



Image 3.1: Inverter with included cigarette lighter adapter and battery clamp cables.

4. PRODUCT FEATURES

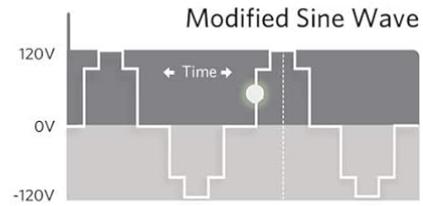
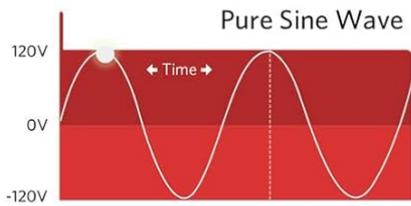
- **Pure Sine Wave Output:** Provides stable and clean power, suitable for sensitive electronics, reducing electrical noise and interference.
- **300W Continuous Power:** Delivers reliable power for various devices up to 300 watts.
- **Dual USB Ports (4.2A):** Allows for fast charging of smartphones, tablets, and other USB-powered devices.
- **AC Outlet:** Standard 220V AC outlet for powering small appliances.
- **Intelligent Cooling Fan:** Operates quietly and adjusts speed based on temperature and load to prevent overheating.
- **Multiple Protection Features:** Includes overload, over-voltage, under-voltage, over-temperature, and short-circuit protection.
- **Compact and Durable Design:** Aluminum alloy casing for heat dissipation and durability.

4.1 Pure Sine Wave vs. Modified Sine Wave

This inverter produces a pure sine wave output, which is identical to the AC power supplied by your household utility. This makes it safe for all types of electronics, especially sensitive ones like laptops, medical equipment, and audio systems, which can be damaged by modified sine wave inverters.

Pure Sine Wave Output

Causing less damage and loss to your devices.



BESTEK VS. Other Brands

BESTEK ——— Other Brands ———



Image 4.1: Visual comparison showing the smooth curve of a pure sine wave versus the stepped output of a modified sine wave.

4.2 Universal Compatibility

The BESTEK 300W Pure Sine Wave Inverter is compatible with a wide range of devices, including laptops, smartphones, tablets, MP3 players, cameras, and small gaming consoles. It is not suitable for high-power appliances such as hair dryers, irons, coffee makers, or electric kettles.

Universal Compatibility

Supports most smart phones,notebook,AUT,and camera



Image 4.2: The inverter can power devices like notebooks, smartphones, MP3 players, tablets, PSV, and cameras.

BESTEK 300W Power Inverter

Making your devices easier and faster to charge



1. The max voltage capacity of this inverter is 12V
2. The max wattage capacity of this inverter is 300 watts
3. Please check wattage and voltage requirement of your devices to using

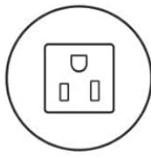
Image 4.3: Examples of appliances (hair dryer, iron, straightener, coffee maker) that exceed the inverter's 300W capacity and should not be used.

4.3 Fast & Smart Charging

The inverter features two USB ports with a combined output of 4.2A, capable of intelligently identifying connected devices for optimized charging. The AC outlet provides standard power for other electronics.

Fast & Smart Charging

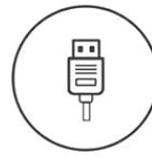
Automatically identifies device charging scenarios



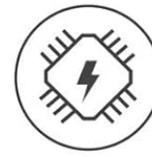
AC outlet



Quick charge



2 USB ports



Intelligent
Identification



Image 4.4: The inverter's AC outlet and dual USB ports providing power to a tablet and smartphone.

4.4 High-Speed Cooling Fan

An integrated intelligent cooling fan dissipates heat quickly, preventing the inverter from overheating during operation. The fan's speed adjusts automatically based on the internal temperature and load, ensuring efficient cooling and quiet operation.

High Speed Cooling Fan

Dissipate working heat fast, avoid overheating



Image 4.5: Internal view highlighting the high-speed cooling fan designed for efficient heat dissipation.

4.5 Isolation Voltage Protection

The inverter incorporates advanced protection circuits to safeguard both the inverter and your connected devices from various electrical issues, including over-voltage, under-voltage, overload, short-circuit, and over-temperature conditions.

Isolation Voltage Protection

Perfect protection for your device

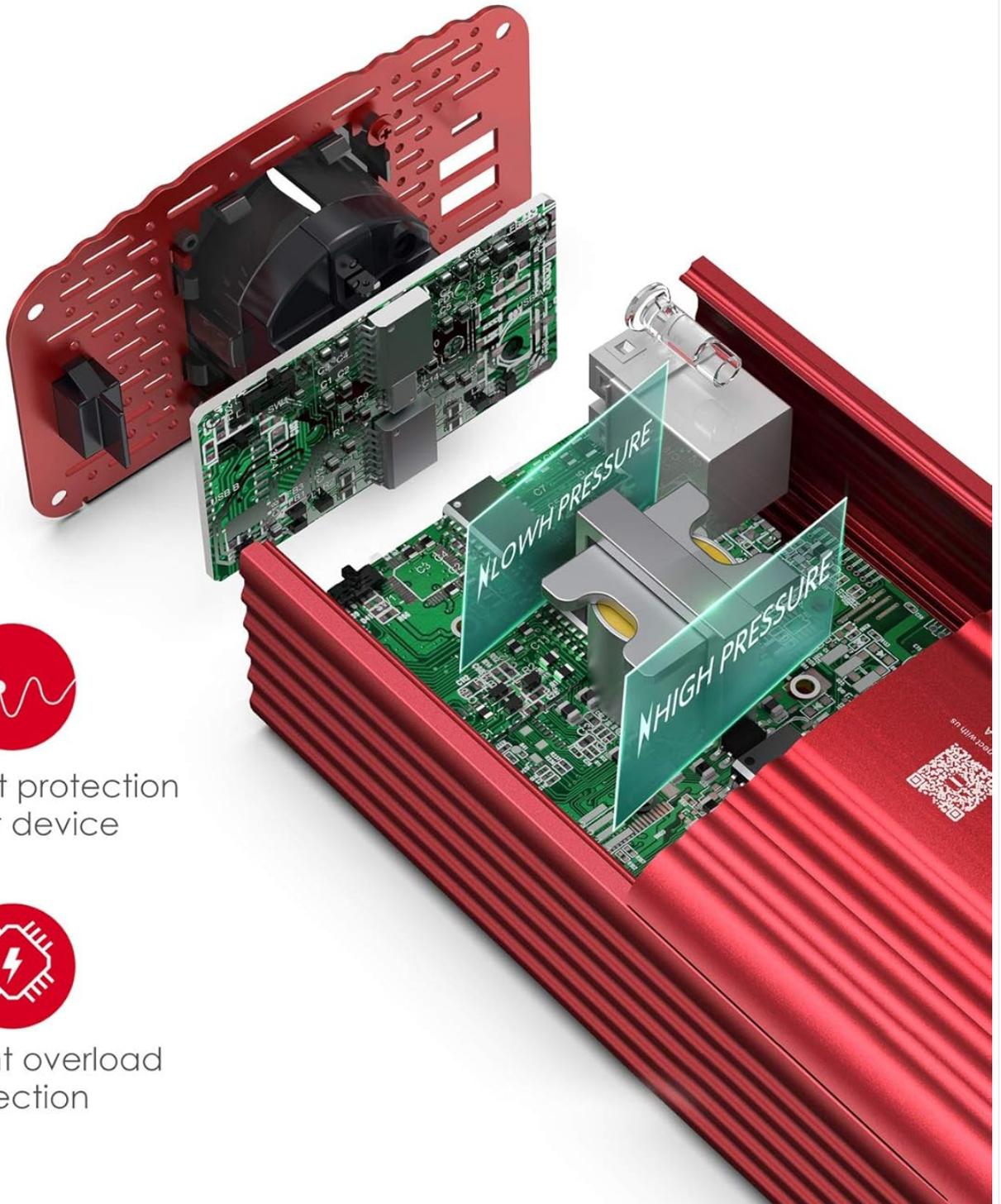


Image 4.6: Internal components illustrating the intelligent circuit device and overload protection for enhanced safety.

5. SETUP AND INSTALLATION

Before connecting the inverter, ensure your vehicle's engine is off and the inverter's power switch is in the "OFF" position.

5.1 Connecting via Cigarette Lighter Adapter (Up to 150W)

1. Insert the cigarette lighter adapter into the inverter's DC input port.

2. Plug the cigarette lighter adapter firmly into your vehicle's 12V cigarette lighter socket.
3. Ensure the connection is secure. This method is suitable for loads up to 150W.

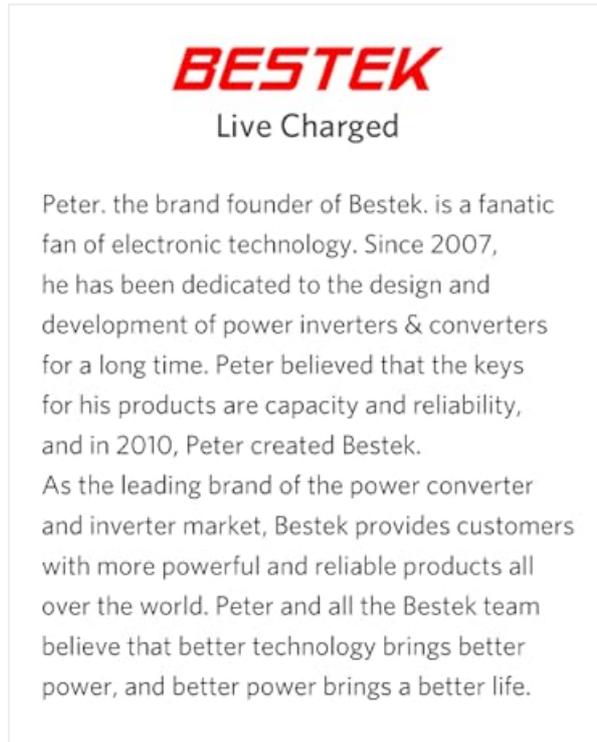


Image 5.1: The inverter connected to a car's cigarette lighter socket, powering a smartphone.

5.2 Connecting Directly to Battery (Up to 300W)

For loads exceeding 150W or to utilize the full 300W capacity, connect the inverter directly to your vehicle's battery using the provided battery clamp cables.

1. Connect the red battery clamp cable to the positive (+) terminal of the inverter.
2. Connect the black battery clamp cable to the negative (-) terminal of the inverter.
3. Connect the red battery clamp to the positive (+) terminal of your vehicle's 12V battery.
4. Connect the black battery clamp to the negative (-) terminal of your vehicle's 12V battery.
5. Ensure all connections are tight and secure.

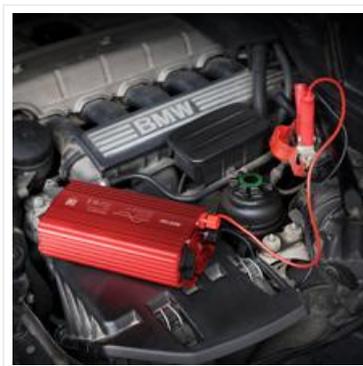


Image 5.2: The inverter connected to a car battery using the red and black battery clamp cables.

6. OPERATING INSTRUCTIONS

1. After connecting the inverter to the 12V DC power source (cigarette lighter or battery), switch the inverter's power button to the "ON" position. The indicator light should illuminate.

2. Plug your AC-powered device into the inverter's AC outlet or your USB-powered device into one of the USB ports.
3. Turn on your device.
4. When finished, turn off your device, then switch the inverter's power button to "OFF", and finally disconnect it from the power source.

Important Considerations:

- Always ensure the total wattage of all connected devices does not exceed 300W.
- For optimal performance and to prevent battery drain, it is recommended to operate the inverter with the vehicle's engine running, especially when powering higher-wattage devices.
- The inverter may emit a slight humming sound, which is normal. The cooling fan will activate as needed.

7. MAINTENANCE

- Keep the inverter clean and free from dust and debris. Use a dry cloth to wipe the exterior.
- Ensure ventilation openings are not obstructed.
- Regularly check all connections for tightness and corrosion.
- Store the inverter in a cool, dry place when not in use.
- If a fuse blows, replace it with a fuse of the same type and rating (refer to specifications).

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power output / Inverter not turning on	Inverter switch is OFF Loose connection Blown fuse Low battery voltage Overload protection activated	Turn switch to ON Check and tighten all connections Replace fuse (if applicable) Recharge vehicle battery Reduce load, restart inverter
Device not charging via USB	USB cable faulty Device not compatible Inverter not powered	Try a different USB cable Check device requirements Ensure inverter is ON
Inverter shuts down frequently	Overload Overheating Low battery voltage	Reduce connected load Ensure proper ventilation, clear fan vents Recharge vehicle battery
Fan is noisy	Normal operation under load/high temperature Obstructed fan	This is normal. Clear any obstructions from fan vents.

9. SPECIFICATIONS

Feature	Value
Model Number	MRZ3013BU

Feature	Value
Brand	BESTEK
Input Voltage	12V DC
Output Voltage	220V AC
Continuous Power	300 Watts
USB Output	2 Ports, 4.2A total
Output Waveform	Pure Sine Wave
Efficiency	42%
Item Weight	707 Grams
Protection Features	Overload, Over-voltage, Under-voltage, Over-temperature, Short-circuit

Note: The efficiency value of 42% is taken directly from the provided product specifications. Typical inverter efficiencies are generally higher.

10. WARRANTY AND SUPPORT

BESTEK provides a **24-month warranty** for this product from the date of purchase. This warranty covers manufacturing defects and workmanship. It does not cover damage caused by misuse, accidents, unauthorized modifications, or normal wear and tear.

For technical support, warranty claims, or any questions regarding your BESTEK product, please contact our customer service. Refer to the product packaging or BESTEK's official website for contact information.

We are committed to providing friendly and helpful service.